Index of Papers Published in Journal of Aircraft

Volume 3—January through December 1966

Issue	Pages	Issue	Pages
January–February	1–96	July–August	289–384
March–April	97–192	September–October	385–480
May–June	193–288	November–December	481–608

EN, TC, and SA indicate Engineering Note, Technical Comment, and Survey Article, respectively.

AUTHORS

Addy Alva L. (see Korst, Helmut H.)

Allen, Donald R. and Ballinger, Herbert W. Small arms fire effects on aluminum honeycomb panels. (EN) ... 164

Amsler, R. C. (see Thurston, S.)

Andersen, W. Lee (see Bagby, C. L.)

Andrew, G. M. (see Cahn, M. S.)

Andrews, William H. (see Sadoff, Melvin)

Azuma, Akira (see Washizu, Kyuichiro)

Bagby, C. L. and Andersen, W. Lee. Effect of turbofan cycle variables on aircraft cruise performance ... 385

Baker, Robert D. Measurement of takeoff and landing performance using an airborne motion picture camera ... 59

Ballinger, Herbert W. (see Allen, Donald R.)

Barnes, J. F. (see Glenny, R. J. E.)

Beard, M. G. Status report on latest development in clear air turbulence ... 443

Beck, Woodrow E. (see Traksel, John)

Bennett, Robert M. (see Gilman, Jean Jr.)

Blake, Margaret (see Jones, David I. G.)

Blick, Edward F. (see Fisher, Donald H.)

Boskovich, B. and Kaufmann, R. E. Evolution of the Honeywell first-generation adaptive autopilot and its applications to F-94, F-101, X-15, and X-20 vehicles ... 296

Bovaird, R. L. (see Ellis, D. S.)

Bray, Richard S. (see Sadoff, Melvin)

Brown, John R. Advanced hydro-ski vehicles for amphibious warfare (MSS) ... 91

Bunger, D. R. and Dibble, D. R. Technique for evaluation and analysis of maintainability (TEAM). (EN) ... 252

Burroughs, J. D. Dynamic testing of the 80-knot hydrofoil craft FRESH-1. (MSS) ... 284

Byrnes, A. L., Hensleigh, W. E., and Tolve, L. A. Effect of horizontal stabilizer vertical location on the design of large transport aircraft ... 97

Cahn, M. S., Stevens, J. R., Andrew, G. M., and Garcia, J. R. Stability derivatives by rheoelectric analog. (EN) ... 590

Cannon, C. H. Military and civil all weather landing systems for C-141 ... 529

Caraher, J. M. (see Reisman, C. A.)

Carlson, Harry W. (see Jackson, Charlie M. Jr.)

Chow, Wen L. (see Korst, Helmut H.)

Clark, James W. (see Miller, David P.)

Conolly, Alan C. Designing for cavitation-free operation on hydrofoils with NACA 16-series sections ... 598

Crichlow, W. J. and Sorenson, V. S. Advancements in monofilament structural composite technology ... 431

Denke, P. H. (see Przemieniecki, J. S.)

Dibble, D. R. (see Bunger, D. R.)

Dufrane, Kenneth H. An underwater thermoelectric reactor plant. (MSS) ... 376

Ellis, D. S. and Bovaird, R. L. Tactical avionics maintenance simulation ... 158

Emero, Donald H. and Spunt, Leonard Wing box optimization under combined shear and bending ... 130

Evanbar, M. S. (see Thurston, S.)

Falk, Felix (see Grenleski, Stephen E.)

Fisher, Donald H. and Blick, Edward F. Turbulent damping by flabby skins. (EN) ... 163

Freschl, Edward, Jr. and Steel, Elbert S. Development of the XB-70A propulsion system ... 147

Fuller, J. R. Strength margins for combined random stresses ... 124

Garcia, J. R. (see Cahn, M. S.)

Gardner, J. (see Jones, James C.)

Gearhart, Walter S. and Henderson, Robert E. Selection of a propulsor for a submersible system. (MSS) ... 84

——Tip clearance cavitation in shrouded underwater propulsors. (MSS) ... 185

Gibbings, J. C. An empiric correlation of some transonic aerofoil characteristics ... 411

Gilman, Jean, Jr. and Bennett, Robert M. A wind-tunnel technique for measuring frequency-response functions for gust load analyses ... 535

Glenny, R. J. E. and Barnes, J. F. Some materials and cooling techniques applicable to air-breathing engines at high flight speeds ... 507

Gregory, Thomas J. (see Petersen, Richard H.)

Grenleski, Stephen E. and Falk, Felix An investigation of catalytic ignition of JP-5 and air mixtures ... 141

Ham, Norman D. and Young, Maurice I. Torsional oscillation of helicopter blades due to stall ... 218

Handler, Eugene H. Tilt and vertical float aircraft for open ocean operations. (SA) ... 481

Harris, Roy V. Jr. (see Robins, A. Warner)

Hartofilis, S. A. (see Kaufman, L. G. II)

Haselton, Frederick R., Wilson, William G., and Rice, Roy S. Tandem propeller concept of submarine propulsion and control (MSS) ... 180

Heinrich, Helmut G. and Jamison, L. R., Jr. Parachute stress analysis during inflation and at steady state ... 52

——Aerodynamics of the supersonic guide surface parachute ... 105

Hemsworth, Martin C. (see Neitzel, Robert E.)

Henderson, Robert E. (see Gearhart, Walter S.)

Hensleigh, W. E. (see Byrnes, A. L.)

Hesse, Walter J. (see Josephs, Lyman C. III)

Hirsch, D. L. and McCormick, R. L. Experimental investigation of pilot dynamics in a pilot-induced oscillation situation ... 567

Hirtreiter, Walter J. (see Statler, Irving C.)

Hohenemser, Kurt H. Flow induction by rotary jets ... 18

——and Porter, J. L. Contribution to the theory of rotary jet flow induction ... 339

Horikoshi, Jiro Elevator control system stiffness adaptive to optimum longitudinal control response ... 318

Jackley, D. N. (see Reisman, C. A.)

Jackson, Charlie M., Jr. and Carlson, Harry W. Nomograms for determining sonic-boom overpressure (EN) ... 74

Jamison, L. R., Jr. (see Heinrich, Helmut G.)

Johns, D. J. (see Rhodes, A. J.)

Johnson, Arnold R., Mead, Harold R., and Scheuing, Richard A. Beneficial interference effects obtained with ring wings at supersonic speeds ... 111

Johnson, Virgil E. Jr. Water-jet propulsion for high-speed hydrofoil craft. (MSS) ... 174

Jones, David I. G. and Blake, Margaret Stability of ground effect machines ... 118

——Hovering performance of plenum chamber GEMS over land and water ... 333

Jones, James C. and Gardner, J. An airborne digital navigation system in an ASW aircraft, MOD 1 ... 154

Josephs, Lyman C. III and Hesse, Walter J. Survey of significant technical problems unique to VSTOL encountered in the development of the XC-142A ... 3

aplan, Paul and Lehman, August F. Experimental studies of hydroelastic instabilities of cavitating hydrofoils. (MSS) ... 262

Kaufman, L. G. II, Meckler, L., and Hartofilis, S. A. An investigation of flow separation and aerodynamic controls at hypersonic speeds ... 555

Kaufmann, R. E. (see Boskovich, B.)

Kidd, Rex O. Application of statistical experimental design techniques to flight-test programs ... 67

Kikuhara, Shizuo and Tokuda, Koichi A new STOL flying boat design ... 462

Kisslinger, Robert L. and Vetsch, George J. Manual terrain-following system development for a supersonic fighter aircraft ... 305

Koo, Jiro (see Washizu, Kyuichiro)

Korst, Helmut H., Addy, Alva L., and Chow, Wen L. Installed performance of air-augmented nozzles based on analytical determination of internal ejector characteristics ... 498

Kramer, Kenneth C. A-7A AFCS: A flight-proved high-gain system 454

Kuchinka, A. J. Prediction of off-runway takeoff and landing performance ... 213

Kutney, J. T. Propulsion system development for V/STOL transports ... 489

Lappe, U. Oscar Low-altitude turbulence model for estimating gust loads on aircraft ... 41

Lawrence, Kent L. Bending-torsion transfer matrices associated with swept surfaces. (EN) ... 478

Lehman, August F. An experimental study of the dynamic and steady-state flow disturbances encountered by aircraft during a carrier landing approach ... 208

—— (see Kaplan, Paul)

Levine, Boris Using maintenance float to measure the value of maintainability and reliability. (EN) ... 588

Libove, Charles Buckling of a compression member in a rigid-joint truss. Part I: Equal end restraints ... 347

Lynn, Robert R. Wing-rotor interactions ... 326

Macoy, Norman H. (see Norman, Sol M.)

Mallery, C. G. and Neebe, F. C. Flight test of General Electric self-adaptive control ... 449

Index of Papers Published in Journal of Aircraft

Volume 3—January through December 1966

Issue	Pages	Issue	Pages
January–February	1–96	July–August	289–384
March–April	97–192	September–October	385–480
May–June	193–288	November–December	481–608

EN, TC, and SA indicate Engineering Note, Technical Comment, and Survey Article, respectively.

AUTHORS

Addy Alva L. (see Korst, Helmut H.)

Allen, Donald R. and Ballinger, Herbert W. Small arms fire effects on aluminum honeycomb panels. (EN) ... 164

Amsler, R. C. (see Thurston, S.)

Andersen, W. Lee (see Bagby, C. L.)

Andrew, G. M. (see Cahn, M. S.)

Andrews, William H. (see Sadoff, Melvin)

Azuma, Akira (see Washizu, Kyuichiro)

Bagby, C. L. and Andersen, W. Lee. Effect of turbofan cycle variables on aircraft cruise performance ... 385

Baker, Robert D. Measurement of takeoff and landing performance using an airborne motion picture camera ... 59

Ballinger, Herbert W. (see Allen, Donald R.)

Barnes, J. F. (see Glenny, R. J. E.)

Beard, M. G. Status report on latest development in clear air turbulence ... 443

Beck, Woodrow E. (see Traksel, John)

Bennett, Robert M. (see Gilman, Jean Jr.)

Blake, Margaret (see Jones, David I. G.)

Blick, Edward F. (see Fisher, Donald H.)

Boskovich, B. and Kaufmann, R. E. Evolution of the Honeywell first-generation adaptive autopilot and its applications to F-94, F-101, X-15, and X-20 vehicles ... 296

Bovaird, R. L. (see Ellis, D. S.)

Bray, Richard S. (see Sadoff, Melvin)

Brown, John R. Advanced hydro-ski vehicles for amphibious warfare (MSS) ... 91

Bunger, D. R. and Dibble, D. R. Technique for evaluation and analysis of maintainability (TEAM). (EN) ... 252

Burroughs, J. D. Dynamic testing of the 80-knot hydrofoil craft FRESH-1. (MSS) ... 284

Byrnes, A. L., Hensleigh, W. E., and Tolve, L. A. Effect of horizontal stabilizer vertical location on the design of large transport aircraft ... 97

Cahn, M. S., Stevens, J. R., Andrew, G. M., and Garcia, J. R. Stability derivatives by rheoelectric analog. (EN) ... 590

Cannon, C. H. Military and civil all weather landing systems for C-141 ... 529

Caraher, J. M. (see Reisman, C. A.)

Carlson, Harry W. (see Jackson, Charlie M. Jr.)

Chow, Wen L. (see Korst, Helmut H.)

Clark, James W. (see Miller, David P.)

Conolly, Alan C. Designing for cavitation-free operation on hydrofoils with NACA 16-series sections ... 598

Crichlow, W. J. and Sorenson, V. S. Advancements in monofilament structural composite technology ... 431

Denke, P. H. (see Przemieniecki, J. S.)

Dibble, D. R. (see Bunger, D. R.)

Dufrane, Kenneth H. An underwater thermoelectric reactor plant. (MSS) ... 376

Ellis, D. S. and Bovaird, R. L. Tactical avionics maintenance simulation ... 158

Emero, Donald H. and Spunt, Leonard Wing box optimization under combined shear and bending ... 130

Evanbar, M. S. (see Thurston, S.)

Falk, Felix (see Grenleski, Stephen E.)

Fisher, Donald H. and Blick, Edward F. Turbulent damping by flabby skins. (EN) ... 163

Freschl, Edward, Jr. and Steel, Elbert S. Development of the XB-70A propulsion system ... 147

Fuller, J. R. Strength margins for combined random stresses ... 124

Garcia, J. R. (see Cahn, M. S.)

Gardner, J. (see Jones, James C.)

Gearhart, Walter S. and Henderson, Robert E. Selection of a propulsor for a submersible system. (MSS) ... 84

——Tip clearance cavitation in shrouded underwater propulsors. (MSS) ... 185

Gibbings, J. C. An empiric correlation of some transonic aerofoil characteristics ... 411

Gilman, Jean, Jr. and Bennett, Robert M. A wind-tunnel technique for measuring frequency-response functions for gust load analyses ... 535

Glenny, R. J. E. and Barnes, J. F. Some materials and cooling techniques applicable to air-breathing engines at high flight speeds ... 507

Gregory, Thomas J. (see Petersen, Richard H.)

Grenleski, Stephen E. and Falk, Felix An investigation of catalytic ignition of JP-5 and air mixtures ... 141

Ham, Norman D. and Young, Maurice I. Torsional oscillation of helicopter blades due to stall ... 218

Handler, Eugene H. Tilt and vertical float aircraft for open ocean operations. (SA) ... 481

Harris, Roy V. Jr. (see Robins, A. Warner)

Hartofilis, S. A. (see Kaufman, L. G. II)

Haselton, Frederick R., Wilson, William G., and Rice, Roy S. Tandem propeller concept of submarine propulsion and control (MSS) ... 180

Heinrich, Helmut G. and Jamison, L. R., Jr. Parachute stress analysis during inflation and at steady state ... 52

——Aerodynamics of the supersonic guide surface parachute ... 105

Hemsworth, Martin C. (see Neitzel, Robert E.)

Henderson, Robert E. (see Gearhart, Walter S.)

Hensleigh, W. E. (see Byrnes, A. L.)

Hesse, Walter J. (see Josephs, Lyman C. III)

Hirsch, D. L. and McCormick, R. L. Experimental investigation of pilot dynamics in a pilot-induced oscillation situation ... 567

Hirtreiter, Walter J. (see Statler, Irving C.)

Hohenemser, Kurt H. Flow induction by rotary jets ... 18

——and Porter, J. L. Contribution to the theory of rotary jet flow induction ... 339

Horikoshi, Jiro Elevator control system stiffness adaptive to optimum longitudinal control response ... 318

Jackley, D. N. (see Reisman, C. A.)

Jackson, Charlie M., Jr. and Carlson, Harry W. Nomograms for determining sonic-boom overpressure (EN) ... 74

Jamison, L. R., Jr. (see Heinrich, Helmut G.)

Johns, D. J. (see Rhodes, A. J.)

Johnson, Arnold R., Mead, Harold R., and Scheuing, Richard A. Beneficial interference effects obtained with ring wings at supersonic speeds ... 111

Johnson, Virgil E. Jr. Water-jet propulsion for high-speed hydrofoil craft. (MSS) ... 174

Jones, David I. G. and Blake, Margaret Stability of ground effect machines ... 118

——Hovering performance of plenum chamber GEMS over land and water ... 333

Jones, James C. and Gardner, J. An airborne digital navigation system in an ASW aircraft, MOD 1 ... 154

Josephs, Lyman C. III and Hesse, Walter J. Survey of significant technical problems unique to VSTOL encountered in the development of the XC-142A ... 3

aplan, Paul and Lehman, August F. Experimental studies of hydroelastic instabilities of cavitating hydrofoils. (MSS) ... 262

Kaufman, L. G. II, Meckler, L., and Hartofilis, S. A. An investigation of flow separation and aerodynamic controls at hypersonic speeds ... 555

Kaufmann, R. E. (see Boskovich, B.)

Kidd, Rex O. Application of statistical experimental design techniques to flight-test programs ... 67

Kikuhara, Shizuo and Tokuda, Koichi A new STOL flying boat design ... 462

Kisslinger, Robert L. and Vetsch, George J. Manual terrain-following system development for a supersonic fighter aircraft ... 305

Koo, Jiro (see Washizu, Kyuichiro)

Korst, Helmut H., Addy, Alva L., and Chow, Wen L. Installed performance of air-augmented nozzles based on analytical determination of internal ejector characteristics ... 498

Kramer, Kenneth C. A-7A AFCS: A flight-proved high-gain system 454

Kuchinka, A. J. Prediction of off-runway takeoff and landing performance ... 213

Kutney, J. T. Propulsion system development for V/STOL transports ... 489

Lappe, U. Oscar Low-altitude turbulence model for estimating gust loads on aircraft ... 41

Lawrence, Kent L. Bending-torsion transfer matrices associated with swept surfaces. (EN) ... 478

Lehman, August F. An experimental study of the dynamic and steady-state flow disturbances encountered by aircraft during a carrier landing approach ... 208

—— (see Kaplan, Paul)

Levine, Boris Using maintenance float to measure the value of maintainability and reliability. (EN) ... 588

Libove, Charles Buckling of a compression member in a rigid-joint truss. Part I: Equal end restraints ... 347

Lynn, Robert R. Wing-rotor interactions ... 326

Macoy, Norman H. (see Norman, Sol M.)

Mallery, C. G. and Neebe, F. C. Flight test of General Electric self-adaptive control ... 449

McCormick, R. L. (see Hirsch, D. L.)
McGregor, D. M. and Smith, R. E. Handling qualities research at the National Aeronautical Establishment, Ottawa, using airborne V/STOL simulators ... 578
Mead, Harold R. (see Johnson, Arnold R.)
Meckler, L. (see Kaufman, L. G. II)
Milla, J. H. and Blick, E. F. Lift and drag characteristics of a biannular wing airplane (EN) ... 586
Miller, David P. and Clark, James W. Investigation of the use of vectored thrust during carrier landings ... 310
Miller, Leonard D. (see Stroud, John F.)
Monk, John R. (see Wallace, Richard E.)
Montgomery, Raymond C. and Moul, Martin T. Analysis of deep-stall characteristics o T-tailed aircraft configurations and some recovery procedures ... 562
Morris, Odell A. (see Robins, A. Warner)
Moul, Martin T. (see Montgomery, Raymond C.)
Nakamura, Yasuharu and Tanabe, Yoshikazu Some experimental contributions on single degree-of-freedom flutter in two-dimensional low supersonic flow ... 405
Neebe, F. C. (see Mallery, C. G.)
Neitzel, Robert E. and Hemsworth, Martin C. High-bypass turbofan cycles for long-range subsonic transports ... 354
Norman, Sol M. and Macoy, Norman H. Inference of clear air turbulence by means of an airborne infrared system ... 289
Norton, D. A. (see Olason, M. L.)
Noyes, Joseph V. Design of an aircraft utilizing fiberglass reinforced primary structure ... 436
Oka, Tōichi (see Washizu, Kyuichiro)
Olason, M. L. and Norton, D. A. Aerodynamic design philosophy of the Boeing 737 ... 524
Parks, Jerry K. Development of a multichannel optical correlation detector for sonar signals. (MSS) ... 278
Payne, Peter R. On the resistance of blunt forms ... 592
Petersen, Richard H., Gregory, Thomas J., and Smith, Cynthia L. Some comparisons of turboramjet-powered hypersonic aircraft for cruise and boost missions ... 398
Peterson, George P. Advanced composites for structures ... 426
Petrie, David M. Operational and developmental experience on the U. S. Navy hydrofoil "high point" (MSS) ... 79
Petroff, Alex N. Comments on "Nuclear-powered surface effect ship design problems" (TC) ... 78
Piearcey, B. J. and VerSnyder, F. L. A new development in gas turbine materials: The properties and characteristics of PWA 664 ... 390
Porter, J. L. (see Hohenemser, K. H.)
Postlewaite, John E. Thrust performance of suppressor nozzles. (EN) ... 587
Przemieniecki, J. S. and Denke, P. H. Joining of complex substructures by the matrix force method ... 236
Ray, Edward J. (see Taylor, Robert T.)
Reisman, C. A., Caraher, J. M., and Jackley, D. N. Combustion system for an underwater thermal propulsion system. (MSS) ... 365
Rhodes, A. J. and Johns D. J. Chordwise divergence of rectangular flat plate wings at supersonic speeds (EN) ... 76
Rice, Roy S. (see Haselton, Frederick R.)
Robins, A. Warner, Morris, Odell A., and Harris, Roy V., Jr. Recent research results in the aerodynamics of supersonic vehicles ... 573
Rodgers, Edward J. Relationship between the neutral point, maneuver point, and center of gravity for stability. (TC) ... 479
Roseman, T. Detachable communications relay pods. (EN) ... 250
Sadoff, Melvin, Bray, Richard S., and Andrews, William H. Summary of NASA research on jet transport control problems in severe turbulence ... 193
Saltzman, A. R. Closed loop thermal process control of airborne electronic equipment ... 244
Schaufele, Roger D. (see Shevell, Richard S.)
Scheuing, Richard A. (see Johnson, Arnold R.)
Schmidt, Carl F. Looking backward—and forward (EDITORIAL) ... 1
Segel, Leonard A method for predicting nonperiodic air loads on a rotary wing ... 541
Shevell, Richard S. and Schaufele, Roger D. Aerodynamic design features of the DC-9 ... 515
Smith, Cynthia L. (see Petersen, Richard H.)
Smith, R. E. (see McGregor, D. M.)
Smith, Ralph H. VTOL control power requirements reappraised ... 11
Sorenson, V. S. (see Crichlow, W. J.)
Spunt, Leonard (see Emero, Donald H.)
Stapleford, Robert L. (see Teper, Gary L.)
Statler, Irving C., Tufts, Orren B., and Hirtreiter, Walter J. A new capability for measuring dynamic air loads in a wind tunnel ... 418
Steel, Elbert S. (see Freschl, Edward Jr.)
Steils, William T. Jr. V/STOL hover control system analysis ... 469
Steiner, Roy A review of NASA high-altitude clear air turbulence sampling programs ... 48
Stevens, J. R. (see Cahn, M. S.)
Stroud, John F. and Miller, Leonard D. Hypersonic inlet boundary-layer research ... 548
Surry, Jean C. Three-dimensional flow characteristics about a curved circular cylinder (EN) ... 73
Tanabe, Yoshikazu (see Nakamura, Yasuharu)
Taylor, Robert T. and Ray, Edward J. Factors affecting the stability of T-tail transports ... 359
Teper, Gary L. and Stapleford, Robert L. An assessment of the lateral-disectional handling qualities of a large aircraft in the landing approach ... 201
Thurston, S. and Amsler, R. C. Review of marine propellers and ducted propeller propulsive devices. (MSS) ... 255
——**and Evanbar, M. S.** Efficiency of a propulsor on a body of revolution-inducting boundary-layer fluid. (MSS) ... 270
Tindell, Runyon H. A concise approach to V/STOL propulsion ... 231
Tokuda, Koichi (see Kikuhara, Shizuo)
Tolve, L. A. (see Byrnes, A. L.)
Traksel, John and Beck, Woodrow E. Waterjet propulsion for marine vehicles. (MSS) ... 167
Tufts, Orren B. (see Statler, Irving C.)
van Eepoel, Robert P. Ocean bottom scanning sonar (EN) ... 95
VerSnyder, F. L. (see Piearcey, B. J.)
Vetsch, George J. (see Kisslinger, Robert L.)
Wallace, Richard E. and Monk, John R. A technique for testing airfoil sections at transonic speeds ... 35
Washizu, Kyuichiro, Azuma, Akira, Kōo, Jiro, and Oka, Tōichi Experiments on a model helicopter rotor operating in the vortex ring state ... 225
Wilson, William G. (see Haselton, Frederick R.)
Wollner, Bertram C. Response of hypersonic winged vehicles to abrupt control displacements ... 30
Yates, E. Carson Jr. Modified-strip analysis method for predicting wing flutter at subsonic to hypersonic speeds ... 25
Yoshihara, Hideo Optimum fully cavitated hydrofoils at zero cavitation number. (MSS) ... 372
Young, Maurice I. (see Ham, Norman D.)

SUBJECTS

AERODYNAMICS OF BODIES, COMBINATIONS, AND INTERNAL FLOW

AERODYNAMICS OF WINGS, ROTORS, AND CONTROL SURFACES

Response of hypersonic winged vehicles to abrupt control displacements. Bertram C. Wollner ... 30
A technique for testing airfoil sections at transonic speeds. Richard E. Wallace and John R. Monk ... 35
Aerodynamics of the supersonic guide surface parachute. Helmut G. Heinrich ... 105
Beneficial interference effects obtained with ring wings at supersonic speeds. Arnold R. Johnson, Harold R. Mead, and Richard A. Scheuing ... 111
An experimental study of the dynamic and steady-state flow disturbances encountered by aircraft during a carrier landing approach. August F. Lehman ... 208
Experiments on a model helicopter rotor operating in the vortex ring state. Kyuichiro Washizu, Akira Azuma, Jiro Kōo, and Tōichi Oka 225
Wing-rotor interactions. Robert R. Lynn ... 326
Factors affecting the stability of T-tail transports. Robert T. Taylor and Edward J. Ray ... 359
An empiric correlation of some transonic aerofoil characteristics. J. C. Gibbings ... 411
A new capability for measuring dynamic air loads in a wind tunnel. Irving C. Statler, Orren B. Tufts, and Walter J. Hirtreiter ... 418
A method for predicting nonperiodic air loads on a rotary wing. Leonard Segel ... 541
Recent research results in the aerodynamics of supersonic vehicles. A. Warner Robins, Odell A. Morris, and Roy V. Harris Jr. ... 573
Chordwise divergence of rectangular flat plate wings at supersonic speeds. A. J. Rhodes and D. J. Johns (EN) ... 76
Turbulent damping by flabby skins. Donald H. Fisher and Edward F. Blick (EN) ... 163
Lift and drag characteristics of a biannular wing airplane. J. H. Milla and E. F. Blick (EN) ... 586
Relationship between the neutral point, maneuver point, and center of gravity for stability. Edward J. Rodgers (TC) ... 479

AIRCRAFT

Survey of significant technical problems unique to VSTOL encountered in the development of the XC-142A. Lyman C. Josephs III and Walter J. Hesse ... 3
VTOL control power requirements reappraised. Ralph H. Smith ... 11
Low-altitude turbulence model for estimating gust loads on aircraft. U. Oscar Lappe ... 41
Measurement of takeoff and landing performance using an airborne motion picture camera. Robert D. Baker ... 59
Application of statistical experimental design techniques to flight-test programs. Rex O. Kidd ... 67
Effect of horizontal stabilizer vertical location on the design of large transport aircraft. A. L. Byrnes, W. E. Hensleigh, and L. A. Tolve 97
Stability of ground effect machines. David I. G. Jones and Margaret Blake ... 118
Summary of NASA research on jet transport control problems in severe turbulence. Melvin Sadoff, Richard S. Bray, and William H. Andrews ... 193
An assessment of the lateral-disectional handling qualities of a large aircraft in the landing approach. Gary L. Teper and Robert L. Stapleford ... 201
Prediction of off-runway takeoff and landing performance. A. J. Kuchinka ... 213
Elevator control system stiffness adaptive to optimum longitudinal control response. Jiro Horikoshi ... 318
Hovering performance of plenum chamber GEMS over land and water. David I. G. Jones ... 333
Some comparisons of turboramjet-powered hypersonic aircraft for cruise and boost missions. Richard H. Petersen, Thomas J. Gregory, and Cynthia J. Smith ... 398
Flight test of General Electric self-adaptive control. C. G. Mallery and F. C. Neebe ... 449

A-7A AFCS: A flight-proved high-gain system. Kenneth C. Kramer 454
A new STOL flying boat design. Shizuo Kikuhara and Koichi Tokuda 462
V/STOL hover control system analysis. William T. Steils Jr. 469
Aerodynamic design features of the DC-9. Richard S. Shevell and Roger D. Schaufele 515
Aerodynamic design philosophy of the Boeing 737. M. L. Olason and D. A. Norton 524
Military and civil all weather landing systems for C-141. C. H. Cannon 529
Analysis of deep-stall characteristics of T-tailed aircraft configurations and some recovery procedures. Raymond C. Montgomery and Martin T. Moul 562
Nomograms for determining sonic-boom overpressure. Charlie M. Jackson Jr. and Harry W. Carlson (EN) 74

BIOTECHNOLOGY

Experimental investigation of pilot dynamics in a pilot-induced oscillation situation. D. L. Hirsch and R. L. McCormick 567

COMMUNICATIONS

Detachable communications relay pods. T. Roseman. (EN) 250

COMPUTERS

Stability derivatives by rheoelectric analog. M. S. Cahn, J. R. Stevens, G. M. Andrew, and J. R. Garcia (EN) 590

ELECTRONIC EQUIPMENT

Closed loop thermal process control of airborne electronic equipment. A R. Saltzman 244
Technique for evaluation and analysis of maintainability (TEAM) D. R. Bunger and D. R. Dibble (EN) 252

FACILITIES, RESEARCH, AND SUPPORT

Tactical avionics maintenance simulation. D. S. Ellis and R. L. Bovaird 158
Manual terrain-following system development for a supersonic fighter aircraft. Robert L. Kisslinger and George J. Vetsch 305
Handling qualities research at the National Aeronautical Establishment, Ottawa, using airborne V/STOL simulators. D. M. McGregor and R. E. Smith 578

FLUID MECHANICS

Flow induction by rotary jets. Kurt H. Hohenemser 18
Contribution to the theory of rotary jet flow induction. K. H. Hohenemser and J. L. Porter 339
Hypersonic inlet boundary-layer research. John F. Stroud and Leonard D. Miller 548
An investigation of flow separation and aerodynamic controls at hypersonic speeds. L. G. Kaufman II, L. Meckler, and S. A. Hartofilis. 555
Three-dimensional flow characteristics about a curved circular cylinder. Jean C. Surry (EN) 73

INSTRUMENTATION AND PHOTOGRAPHY

Inference of clear air turbulence by means of an airborne infrared system. Sol M. Norman and Norman H. Macoy 289

MATERIALS, METALLIC

A new development in gas turbine materials: The properties and characteristics of PWA 664. B. J. Piearcey and F. L. VerSnyder 390
Advancements in monofilament structural composite technology. W. J. Crichlow and V. S. Sorenson 431

MATHEMATICS

Using maintenance float to measure the value of maintainability and reliability. Boris Levine (EN) 588

METEOROLOGY

A review of NASA high-altitude clear air turbulence sampling programs. Roy Steiner 48
Status report on latest development in clear air turbulence. M. G. Beard 443

NAVIGATION AND GUIDANCE

An airborne digital navigation system in an ASW aircraft, MOD 1. James C. Jones and J. Gardner 154
Evolution of the Honeywell first-generation adaptive autopilot and its applications to F-94, F-101, X-15, and X-20 vehicles. B. Boskovich and R. E. Kaufmann 296

PROPELLANTS

An investigation of catalytic ignition of JP-5 and air mixtures. Stephen E. Grenleski and Felix Falk 141

PROPULSION

Development of the XB-70A propulsion system. Edward Freschl Jr. and Elbert S. Steel 147
A concise approach to V/STOL propulsion. Runyon H. Tindell 231
Investigation of the use of vectored thrust during carrier landings. David P. Miller and James W. Clark 310
High-bypass turbofan cycles for long-range subsonic transports. Robert E. Neitzel and Martin C. Hemsworth 354
Effect of turbofan cycle variables on aircraft cruise performance. C. L. Bagby and W. Lee Andersen 385
Propulsion system development for V/STOL transports. J. T. Kutney 489
Installed performance of air-augmented nozzles based on analytical determination of internal ejector characteristics. Helmut H. Korst, Alva L. Addy, and Wen L. Chow 498
Thrust performance of suppressor nozzles. John E. Postlewaite (EN) 587

STRUCTURAL MECHANICS

Modified-strip-analysis method for predicting wing flutter at subsonic to hypersonic speeds. E. Carson Yates Jr. 25
Parachute stress analysis during inflation and at steady state. H. G. Heinrich and L. R. Jamison Jr. 52
Strength margins for combined random stresses. J. R. Fuller 124
Wing box optimization under combined shear and bending. Donald H. Emero and Leonard Spunt 130
Torsional oscillation of helicopter blades due to stall. Norman D. Ham and Maurice I. Young 218
Joining of complex substructures by the matrix force method. J. S. Przemieniecki and P. H. Denke 236
Buckling of a compression member in a rigid-joint truss. Part I: Equal end restraints. Charles Libove 347
Some experimental contributions on single degree-of-freedom flutter in two-dimensional low supersonic flow. Yasuharu Nakamura and Yoshikazu Tanabe 405
Advanced composites for structures. George P. Peterson 426
Design of an aircraft utilizing fiberglass reinforced plastic primary structure. Joseph V. Noyes 436
A wind-tunnel technique for measuring frequency-response functions for gust load analyses. Jean Gilman Jr. and Robert M. Bennett 535
Small arms fire effects on aluminum honeycomb panels. Donald R. Allen and Herbert W. Ballinger (EN) 164
Bending-torsion transfer matrices associated with swept surfaces. Kent L. Lawerence (EN) 478

THERMODYNAMICS AND COMBUSTION

Some materials and cooling techniques applicable to air-breathing engines at high flight speeds. R. J. E. Glenny and J. F. Barnes 507

MARINE TECHNOLOGY

Tilt and vertical float aircraft for open ocean operations. Eugene H. Handler (SA) 481
Operational and developmental experience on the U. S. Navy hydrofoil "high point" David M. Petrie (MSS) 79
Selection of a propulsor for a submersible system. Walter S. Gearhart and Robert E. Henderson (MSS) 84
Advanced hydro-ski vehicles for amphibious warfare. John R. Brown (MSS) 91
Waterjet propulsion for marine vehicles. John Traksel and Woodrow E. Beck (MSS) 167
Water-jet propulsion for high-speed hydrofoil craft. Virgil E. Johnson Jr. (MSS) 174
Tandem propeller concept of submarine propulsion and control. Frederick R. Haselton, William G. Wilson, and Roy S. Rice (MSS) 180
Tip clearance cavitation in shrouded underwater propulsors. Walter S. Gearhart (MSS) 185
Review of marine propellers and ducted propeller propulsive devices. S. Thurston and R. C. Amsler (MSS) 255
Experimental studies of hydroelastic instabilities of cavitating hydrofoils. Paul Kaplan and August F. Lehman (MSS) 262
Efficiency of a propulsor on a body of revolution-inducting boundary-layer fluid. S. Thurston and M. S. Evanbar (MSS) 270
Development of a multichannel optical correlation detector for sonar signals. Jerry K. Parks (MSS) 278
Dynamic testing of the 80-knot hydrofoil craft FRESH-1. J. D. Burroughs (MSS) 284
Combustion system for an underwater thermal propulsion system. C. A. Reisman, J. M. Caraher, and D. N. Jackley. (MSS) 365
Optimum fully cavitated hydrofoils at zero cavitation number. Hideo Yoshihara (MSS) 372
An underwater thermoelectric reactor plant. Kenneth H. Dufrane (MSS) 376
On the resistance of blunt forms. Peter R. Payne (MSS) 592
Designing for cavitation-free operation on hydrofoils with NACA 16-series sections. Alan C. Conolly (MSS) 598
Ocean bottom scanning sonar. Robert P. van Eepoel (EN) 95
Comments on "Nuclear-powered surface effect ship design problems" Alex N. Petroff (TC) 78